

Title: Secure transmission of digital data over disturbance channels - immediately
r transmitting digital data on recognition of insufficient signal strength
estimated by receiver

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Abstract

The method involves using a transmitter, installed e.g. in a vehicle, having a baseband section incorporating a buffer (111) for incoming data from an encoder (110), controlled by a redundancy decision unit (122) operating on an estimate (121) of a signal received (120) over the channel. A signature sequence (bk) is generated (113) for multiplication (114) by the readout from the buffer before modulation (112) at intermediate frequency.

In the receiver, accumulated signal energy is estimated and a decision control interrupts the signature sequence and triggers an integrate-and-dump unit using clock recovery.

USE/ADVANTAGE - Direct Spread Spectrum transmission. No acknowledgement channel is necessary. Throughput increased by transmission of only instantaneously required redundancy, and buffer memories need not accommodate more than one data packet.